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Communications and Society Program

Charles M. Firestone
Director

Amy K. Garmer Program Associate September 24, 1996

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Mr. William Caton, Acting Secretary Federal Communications Commission 1919 M Street, N.W. Washington, DC 20554 FEDERAL COMMUNICATIONS GOMENISSION
OFFICE OF CECRETARY

Re: CC Dkt. No. 96-45 Federal State Joint Board on Universal Service

Dear Mr. Secretary:

I am pleased to enclose with this letter, for inclusion in the above-captioned proceeding, four copies of the Report of the Eleventh Annual Aspen Institute Conference on Telecommunications Policy, held August 19-21, 1996 in Aspen Colorado. The Report, written by Professor Robert Entman is entitled, "Implementing Universal Service After the 1996 Telecommunications Act." It summarizes the work of 29 participants from a variety of business, consumer, academic, and governmental interests and viewpoints. We have previously filed an Ex Parte Memorandum in this proceeding concerning the conference.

Please contact me should there be any questions concerning this submission.

Charles M. Firestone, Director

Yours truly,

The Aspen Institute

Communications and Society Program

cc: Members of the Federal Communications Commission Members of the Federal State Joint Board on Universal Service

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Implementing Universal Service After the 1996 Telecommunications Act

The Aspen Institute
Communications and Society Program

Robert M. Entman, Rapporteur Charles M. Firestone, Director

Report of the Eleventh Annual Aspen Institute Conference on Telecommunications Policy August 18–21, 1996 Aspen, Colorado

For additional copies of this paper, please contact:

The Aspen Institute Communications and Society Program Suite 1070 1333 New Hampshire Avenue, N.W. Washington, DC 20036 Phone: (202) 736-5818

Phone: (202) 736-5818 Fax: (202) 467-0790

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Foreword

The following report is the eleventh in an annual series of reports of conferences convened by The Aspen Institute's Communications and Society Program on domestic telecommunications issues. The series began as a meeting of leaders of business, government, academia and the non-profit sector to address matters of state telecommunications regulation. It expanded to American domestic telecommunications policy issues, and even delved into international concerns one year. (That cluster of global issues is now being considered annually in The Aspen Institute Roundtable on International Telecommunications, or AIRIT, which meets each year in a different Aspen Institute locale throughout the world.)

The 1996 meeting of the Aspen Conference on Telecommunications Policy was held August 18–21, 1996 in Aspen, Colorado. The timing was auspicious: six months subsequent to the passage of the landmark Telecommunications Act of 1996, and three months prior to the deadline for a Federal State Joint Board on Universal Service to issue recommendations for revision of the universal service mechanism in the United States consistent with the dictates of the new Telecommunications Act.

The thrust of the new Act was to provide for true and effective competition in and among telecommunications industries throughout the nation. Congress envisions a vigorous, growing system of advanced communications goods and services, an end to monopoly in telephone, cable, and other transmission and access industries, and a better economy and civic society as a result. Still, there is a strong commitment to the concept of universality, that is, widespread connection to the telecommunications network(s), which has characterized the American environment as a goal, and eventually in actuality, throughout this century.

With a new sense of the importance of communications to our society and our economy, however, and new rules for competition, a variety of questions arise as to what universality means in the new environment. First, what do

we mean by universal service (or universal access)? How will it be funded in a competitive regime? In a multi-tiered regulatory system, what are the respective federal, state and local regulatory roles? What can be done in this regime to encourage connection of schools and libraries as required by the Telecommunications Act? What are the roles and obligations of incumbent telecommunications carriers and their new, and older, competitors?

The answers to these questions have tremendous implications not only for the health and perhaps even the survival of telecommunications service providers, but also for the emerging networked society and economy as a whole. Accordingly, answers were difficult and contentious. They pitted the values of competition and efficiency against those of equity, universality, and community. But that is typical of Aspen Conferences, and the type of issues and concerns for which the Aspen roundtable format is particularly suited.

In the following report, a couple of rather novel suggestions emerge, viz., (1) that as a simplified means test, only one line per customer be subsidized, and (2) for discounted telecommunications connections to schools and libraries, a competitive procurement system be established in which subsidies can augment the provision of services when and where appropriate. These and the other suggestions which were debated at the Aspen Conference should be viewed solely as suggestions to advance the dialogue and deliberation on these issues in other fora, not necessarily as the ultimate solution. Particularly the latter suggestion, relating to the application of universal service funds for connections by schools and libraries, warrants further thought and discussion. The proposal is new and innovative, but the Conference did not have the opportunity to deliberate it to the extent normally accorded such proposals at these meetings. We have suggested in Appendix 2 a list of issues that could usefully be explored in a further meeting on that topic.

The sessions were populated with representatives of telecommunications carriers, competitors from the local exchange, long distance, and cable industries, and consumer, academic, and regulatory leaders from the federal, state and local levels. Because space is limited, many who would profitably contribute to this discussion were absent, particularly, representatives of the educational and library communities (since we did not originally anticipate that this would be such a focus of our discussions). Nevertheless, those in attendance represent a broad cross-section of interests, attitudes, philosophies and viewpoints. They worked together to define difficult issues, and make constructive suggestions for practical resolution of these dilemmas.

Accordingly, I would like to commend those participants, listed in Appendix 4, for their openness, constructive attitude, and willingness to grapple with the obtuse questions presented in the current regulatory milieu. We should mention that the members of the Federal State Joint Board, and other decision-making personnel who were in attendance, acted as questioners at the working sessions rather than as advocates of particular positions.

I would also like to thank Robert Entman, our rapporteur for all eleven years of the Conference, for his excellent representation of the deliberations, our Senior Program Associate, Amy Korzick Garmer, for her help in organizing and reviewing the materials, and Gia Nolan, Elizabeth Torrez Golder, and W. Daniel Wright for their coordinating and administrative help at the conference and for producing this report.

Finally, but very significantly, we want to thank our Conference sponsors from competing organizations for contributing generously to The Aspen Institute to make the Aspen Conference on Telecommunications Policy and report possible. They are: Ameritech, AT&T, Bell Atlantic, Cablevision Systems, California Cable Television Association, Continental Cablevision, MCI, NORTEL, NYNEX, TCG Teleport Telecommunications Group, and US West.

Charles M. Firestone, Director Communications and Society Program Washington, DC September, 1996

The Eleventh Annual Aspen Institute Conference on Telecommunications Policy met in Aspen, Colorado this year to reconsider universal service in light of the major changes wrought by the Telecommunications Act of 1996. The atmosphere at the conference reflected the combination of excitement and uncertainty that the new law creates. In this environment, conference organizers felt that universal service policy deserves particularly close attention. The Act mentions universal service and calls for its continuation and upgrading to meet new conditions. Universal service, though never fully defined in law—or at the conference—reflects deep value commitments and, it must be said, powerful political forces. Thus the conference was designed to illuminate three major issues related to universal service, and it resulted in three sets of analyses and recommendations. The starting issues were:

The nature of universal service: How should universal service be defined and identified as the telecommunications industry changes in the wake of the 1996 Act?

Financing the new universal service: Who will pay and how for maintaining or enhancing universal service?

Legal and jurisdictional issues: If desirable services are identified and ways of supporting them determined, how will federal, state, and local governments share jurisdiction over implementation of the new requirements?

Participants separated into three working groups that each considered one of these areas and brought recommendations back to the larger conference for dissection and debate. Discussion within working groups and among all participants sharpened the focus and ultimately yielded analysis and policy suggestions in the following areas:

- 1. Definition of a universal service package for current policy.
- 2. Determination of how the different jurisdictions should contribute to supporting universal service.
- 3. Creation of guidelines for the 1996 Act's requirements to serve schools and libraries.

Before diving into the substance, some clarification: This report is one person's interpretive chronicle of a complex discussion. The goal is to illuminate issues and areas where individuals representing varied perspectives and stakes in communications policy making could generally agree on a diagnosis of a specific policy problem and a set of options or recommendations. In narrating conference discussions, the report sometimes uses language that may not have been explicitly approved at the meeting. It attempts to summarize accurately the major themes and recommendations that emerged from the discourse, but readers should not infer that all participants came to a consensus on everything included here. Nor should they assume that any individual attendee approved any particular point in this account. It would be a fool's errand to seek a wholly consensual document on a policy area in such contentious flux. Furthermore, it is impossible to convey the full assortment of debates and ideas expressed during a very active three-day conference. Perforce, this is a condensation that omits many interesting and useful points raised during the deliberations.

Defining Universal Service in the New Regulatory Environment

The Telecommunications Act of 1996 set a new framework for defining the set of communications services that should be universal as a matter of public policy. The Act prefers competition as a tool to stimulate investment and drive down costs. It mandates following marketplace signals while seeking geographic equity and securing institutional access. Thus the broad parameters for the universal service package encompass a commitment to competitive markets and to equitable access.

A newly competitive marketplace for telecommunications services should foster the introduction of new services, expand the universe of suppliers, and drive costs and prices down. All of these outcomes should help to

achieve universal service goals while reducing the need for regulatory interventions. Nevertheless, the legislation recognizes that the competitive marketplace will not by itself achieve all socially beneficial outcomes.

In addition to defining what services should be part of universal service, the meeting debated key threshold questions. These are listed in a brief appendix to the report, along with a graphical matrix that can organize consideration of primary policy issues. For the purposes of this report, the most important result of the group's definitional efforts was the following list.

1. Universally available services

The group agreed in principle that the following services should be available universally, irrespective of provider or location, to all those who request basic service:

- voice grade access
- touch tone service
- single party service
- access to emergency services and specifically the ability to dial 911 for an emergency with no extra charge for the call
- operator services
- relay services
- toll blocking (as well as other blocking services that allow users to control usage costs)
- directory listing
- access to directory assistance
- equal access to long distance service
- interconnection among all carriers

The presence of a service in this list does not mean the participants believed it should necessarily be included universally in the basic service package. For example, toll blocking may not be a service that all must take when they subscribe to phone service, but it is part of universal service inasmuch as it should be *available* to all users as a matter of public policy.

2. Advanced services

The above elements are all allied with traditional voice service. When debate reached data and advanced services and functionalities, it was inconclusive. No accord emerged as to whether access to data grade services at a specified rate should become part of universal service. Also not resolved was whether all should have equal access to advanced switching or network software functionalities such as SS7, a signaling system used to transport calls more efficiently. Nor did participants agree on whether some amount of usage of any advanced services should also be included in a universal service package. A considerable number of participants did voice support for including in the package some reasonable amount of usage, at least for those low income ratepayers in high cost areas. It is clear that in the near future, policy makers and others will need to develop a process for updating universal service on a regular basis as services beyond Plain Old Telephone Service (POTS) penetrate widely, and the rate of technological innovation accelerates.

Universal Service Policy Options for the Joint Board

The meeting also focused on developing concrete policy options for consideration by the Federal-State Joint Board on Universal Service. The group paid especially close attention to delineating the division of authority for implementing an overall universal service policy among the local, state and federal jurisdictions. While the group did not discuss the merits of any court review of the Federal Communication Commission's (FCC) interconnection rules, the working assumption was that the courts would uphold them. Important working principles were that:

- Incumbent local exchange carriers under growing competitive pressure will no longer be able to afford or justify untargeted, and thus very large, subsidies for basic local telephone service.
- Competition requires efficient pricing for all services including local access and usage.
- Universal service subsidies must be targeted and explicit, and must be neutral with respect to competition.
- Geographic and demographic criteria should be used in distributing universal service subsidies.

1. Harmonizing jurisdictions in administering universal service

The Group recommends that the Joint Board move the telecommunications system toward support of universal service in ways that reflect the

above provisos. This regime would create more efficient pricing while maintaining and continuously updating universal service. Mindful that different states will have different ideas as to what users or geographical areas merit subsidies under universal service, participants made recommendations designed to fulfill the goals mentioned above while allowing flexibility for state decision makers.

- a. In consultation with the Joint Board, the FCC should establish a target, affordable price for basic local telephone service and base universal service subsidies on it. (The group did note, without resolving, the potential problems that could arise if a uniform national price turns out to be far higher or lower than actual costs in many jurisdiction.)
- b. In areas where costs exceed the affordable target price, the federal jurisdiction should collect and distribute subsidies designed to keep the price paid by customers at the target level.
- c. In states that decide the federally mandated target price is excessive for some or all of their residential customers, regulators could set prices below the federal target. But when so choosing, states would have to establish their own universal service fund to make up any difference between the federal target price and the price actually charged consumers. States could not require implicit subsidies to be embedded within basic rates.
- d. TSLRIC (total service long run incremental cost) studies should be conducted to establish the difference between the target rates set by the FCC and by state regulators and the cost of serving customers in a given area.

Example: The FCC might accept a Joint Board recommendation to create a \$25 per month target, "affordable" price. In areas where TSLRIC studies determine that costs are \$40 per month, the federal government would transfer \$15 per month to the carrier (or customer—see below) in this high cost region. But the state of Kentucky might decide that it wants none of its citizens to pay more than \$20 per month for basic residential service. It would be required to create a state-level universal service fund and pay the difference between the federal and state targets, or \$5 per month. In a part of Kentucky where costs are \$40 per month, the federal jurisdiction would provide a \$15 monthly subsidy to reach the \$25 target, and Kentucky would create a state universal service fund to provide the \$5 remainder to achieve its state target of \$20. The state would also provide a \$5 subsidy, to prevent anyone from paying more than \$20, in areas with costs of \$25, or a \$3 subsidy for those in areas with costs of \$23, and so forth.

2. Serving low income consumers

Traditionally, the major stated goal of universal service policy has been ensuring that virtually all households can obtain their own connection to the public telephone network. The conference recommended that the targeted low income support or "lifeline" programs used in such states as California and New York should serve as models for the many states with meager or non-existent lifeline policies. In this way, the group believes that its other recommendations ensure that customers in high cost areas, low income customers, and schools and libraries (discussed thoroughly in the next section) will all be assured coverage by a universal service system that is sustainable in a competitive environment. The group further notes that such a system will be more efficient and therefore able to be more generous. The benefit of efficiency could grow in significance as advanced telecommunications services enter the universal service mix and, perhaps, require higher subsidies.

3. Implementing a practical, simplified means test

Implementing a practical, simplified means test can help to make subsidies flow in a more targeted manner. The goal of demographically targeting subsidies becomes more important as affluent households increasingly order two or more separate telephone lines and as competition grows. The group decided to turn this looming problem into an opportunity for a politically feasible means test. The hope would be to reduce the size of subsidy flows to middle and upper class residential customers without running afoul of political pressures in many states to keep basic local service as affordable as possible for all residential customers.

- a. No primary household should receive a subsidized rate for more than one telephone line. If the household (defined as the residential unit and living group listed as primary for income tax purposes) orders a second line, it would pay the full unsubsidized cost for that second line, and unsubsidized costs for any additional lines.
- b. States that fail to establish their own universal service funds and/or that fail to eliminate subsidies for households having more than one line become ineligible for the federal universal service subsidy. In this way, states have a strong incentive to establish targeted subsidy systems.

Example: Consider a hypothetical customer, Robert Smith, who owns a home with two access lines in Boone, Kansas, where costs are \$50 per month

per line. The federal target price of \$25 entitles Smith to a \$25 monthly subsidy for his first line. If the state of Kansas has a target price of \$20, Smith's first line would also get a \$5 state subsidy, so Smith would pay only \$20 for that line. However, Smith would pay \$50 for his second line—and \$50 for any more lines that he might decide to install. Furthermore, if Smith owns a vacation condo in Palm Beach, he would pay the full unsubsidized cost of any telephone lines serving that condo.

By ordering more than one telephone line, whether for his primary or vacation residences, Smith would demonstrate his lack of need for subsidies. While ideally, ordering a second line might eliminate eligibility for a subsidy even to the first line (since anyone who can afford two lines needs no subsidy for either), conference attendees surrendered to political reality. In states where such a policy would be politically feasible, it might be worth trying, however.

Traditionally, eligibility for welfare services has been used as a means test. When the goal is not just to ensure service to the needy but also to minimize untargeted subsidies going to the middle and upper classes, such a test is insufficient. Some households above the poverty line merit subsidies, especially in high cost areas, but most probably do not. For the vast majority of Americans who are above the poverty level, some other test besides welfare eligibility is required to distinguish those who do deserve subsidization from those who do not. Using the proposed simple (one phone line) means test, policymakers would avoid having to implement a costly and intrusive procedure. Only by employing such a test can the system make substantial progress toward reducing the subsidies to the un-needful middle and upper classes, which cost vastly more than those for the deserving poor and near-poor.

Some participants objected to excluding second residences from any subsidy, arguing that vacation homes should also have the right to one subsidized line. Most of the group, however, felt ownership of a second home is another *ipso facto* demonstration that a consumer lacks need for subsidy.

Another objection is that enforcement relies too heavily upon the honesty of consumers. Many will be tempted to subscribe to multiple lines under multiple names. Or, for example, Mr. Smith could tell the Florida phone company that Palm Beach is his primary residence, and the Kansas company that Kansas is. A possible solution would be to require customers signing up for service to appear in person at a phone company office to show proof of residence in the form of a driver's license or voting registration card.

Customers who refuse to do so would forfeit the right to a subsidized phone line. While the conference recognized this requirement would impose added administrative costs on phone companies, the firms should benefit greatly from the decrease in untargeted subsidies. If this is not the case, if the slight increase in administrative costs is not worthwhile, it must mean the untargeted subsidy problem is not as severe as widely claimed. Enforcement costs should be monitored to ensure they do not, in fact, outweigh the savings in misdirected subsidies.

There will inevitably still be slippage; people will cheat. Nonetheless, this proposal could improve efficiency of the system significantly, and could not reduce efficiency. From the telecommunications providers' point of view, even if some customers receive subsidies through subterfuge, the providers will still be made whole. Only from the aggregate perspective is this a problem, because the size and targeting of the subsidy fund will be distorted. Yet even if 90% of customers cheat, efficiency will improve based on the ten percent who do not. Moreover, the group felt that dishonesty will not reach such high levels.

A third issue arises where the marginal cost of turning on two phone lines is far less than two times the cost of serving one line. For example, the cost of two lines might total \$50, and of a single line, \$39. If the standard subsidized price for the first line is \$25, it would be paradoxical to charge the resident \$39 for the second line, since he or she would then be paying \$64 for two line service that costs only \$50. The solution is to add a proviso to the policy of requiring full cost recovery from all customers receiving two or more lines: no residential customers should pay more than the actual calculated cost of the service they receive. Also, where subsidies go to companies rather than consumers, the policy should ensure that any support does not result in payments exceeding the firm's cost.

The conference participants were mindful of the complicated issues that these recommendations neglect: Precisely how are costs to be calculated? How much de-averaging and precision in establishing cost areas is desirable and possible? Does it make sense to determine costs on a census-block by census-block basis, or rather to employ wider cost zones? Who judges whether costs are calculated correctly? Participants recommended that states determine their own answers to such vexing, important issues. The group noted that the 1996 Act does allow states to de-average costs and subsidies down to whatever level they choose, although the retail prices actually charged must remain "comparable" across the state.

4. Modernizing universal service

When officials decide to enhance the kinds of access, specific functions or services included within universal service obligations, the affordable price targets and subsidies should be revised to reflect any higher costs. Thus for example, if high speed access to the Internet becomes part of the federally-mandated universal service package, the federally-determined price target should be revised to reflect the cost of adding the access. If cost in an area goes from \$40 to \$45 when Internet access is added, either the target price should go from \$25 to \$30, or the federal subsidy should rise from \$15 to \$20—or some combination of an increase in target price and subsidy should occur that would cover the provider's cost.

5. Ensuring that cable television companies are, under appropriate circumstances, eligible for universal service subsidies

Some cable operators may be required by state or local regulators to provide free connections to their systems for schools or other institutions. The participants recommended that should cable be required to give schools a telephony service that falls under the new Universal Service obligations embedded within the 1996 Act, that cable firm be eligible for any state and federal subsidies created as outlined above.

6. Disbursing and raising funds for the universal service support pool

The group recommended that any carrier who stands ready to serve any customer in its own service territory should be eligible to receive universal service support on behalf of any customer selecting that carrier. A carrier would receive a credit for the amount of subsidy for each subsidized customer served. This is a good mechanism for distributing needed subsidies to schools and libraries as well.

Besides making the suggestion that the universal service fund be administered by a neutral party, the meeting touched upon three mechanisms for raising the funds. These are options whose advantages and problems require a technical discussion that falls beyond the scope of this report. But briefly, one idea would be creating a fund to which all carriers contribute, based on their net transmission revenues. A previous Aspen Institute report (Local Competition: Options for Action, 1993) explained this proposal in detail. Instituting explicit surcharges based on the retail revenue of each carrier offers a second alternative. The final suggestion was conducting auctions for

the right to offer universal services, a mechanism that might meet the subsidy pool requirement more efficiently. The absence of consensus at the meeting on how best to change the way we generate the funds required to make universal service work reveals the need for thorough attention to these fiscal matters.

Financing Universal Service for Schools and Libraries

A final area in which the meeting yielded some areas of basic agreement concerned implementing the Act's mandate to serve educational institutions and libraries.

1. Fundamental principles

- a. Market forces should be encouraged and relied on as the preferred way to provide efficient universal service to schools and libraries, including service at discounted rates.
- b. Where markets fail, funding mechanisms for any subsidies should be provider-neutral.
- c. Different levels of subsidy are appropriate for institutions that have different levels of financial capacity.
- d. Beneficiaries of discounts should be expected to maximize the value of universal service benefits and/or subsidies that they receive.
- e. Universal service in these public institutions should be defined as valued *functions* (such as voice, data and video services), not specific technologies for providing any services.
- f. The institutions themselves, rather than regulators, should define what services they need and are ready to incorporate.

The group concluded that a school or library should be entitled to purchase at a specified discount any voice, video, or data service available in that geographic area, regardless of provider. This right should include the possibility of an institution's choosing different providers for different services.

There appeared to be substantial agreement that incentives might properly be used to encourage these entities to obtain higher bandwidth connections. But there was further assent that such incentives should not be coercive or otherwise violate the principle that the institutions themselves are best positioned to assess their own needs.

The meeting discussed criteria for deciding what would indicate a "bona fide request for service" from an institution. The matter is more complicated than it appears at first glance, for institutions—because of misinformation, political agendas, internal conflict and other forces—might well make unrealistic demands upon carriers. This could take the form of an institution filing requests that no supplier could meet at reasonable cost or within reasonable time, or, perhaps, applying for services that it has no way of actually putting to use. One way to minimize waste identified by some participants was requiring institutions to issue a formal Request for Proposals (RFP)—not only to obtain competitive bids that can pass legal muster, but also to ensure that the institutions undertake careful analyses of exactly what they need.

Once capabilities are in place, discussants strongly recommended, data should be collected on a consistent and regular basis to show what services institutions are in fact using. The institutions should be required to report on what services they need and have planned to use; on exactly how they have used subsidy funds; and on what they have accomplished. In this way officials will be able to tell whether there are underserved areas as they find out how any subsidies are enhancing the operation of the institutions. In addition, the information would tell officials about progress toward the geographic equity and other policy goals proposed under the Act. Section 708 (a) (1) (C) (vi) of the Act provides for a National Education Technology Funding Corporation, to act as a clearinghouse in this area. This organization might serve to collect and disseminate the data.

2. The role of competition

Competitive providers are already offering preferred rates, sometimes \$0, to schools and libraries. For example, many cable companies install service outlets and provide other services to schools without charge as part of their franchise obligations. And competitive local exchange companies (CLECs) seeking to serve schools may offer contract rates below those offered by incumbent local exchange companies (ILECs). So long as a carrier has an opportunity to earn sufficient usage and other service revenues from a customer to cover operating expenses and the cost of connecting the institution

to its network, it should be willing to provide the basic feeder plant infrastructure at little or no cost. Thus no universal service program should be needed to subsidize carriers for serving many schools/libraries, those that present adequate revenue potential. Interested suppliers may offer access plus services of any type. Consortia may be formed to offer hardware, software and systems integration, training, and the like. Independent bidders on any aspect of the bundle of services a school or library seeks should be allowed.

3. Minimum capacity

The participants generally felt that the goal in implementing this mandate should be to offer access to a "big pipe" digital line. This accords with the statutory language which seeks "broadband" access for all schools, libraries and hospitals. The FCC should set the minimum capacity that meets this goal.

The amount of capacity to which the institutions must have access under universal service requirements should be geared to a reasonable standard, perhaps based on the number of clients in the school or library. The standard would be designed to prevent unnecessary and unjustified demands for a free or low-priced good. Schools and libraries could acquire a higher level beyond this minimum as part of their procurement.

4. Awarding universal service subsidies

- a. Where there is competitive bidding to serve the institution, the price ceiling for services should be less than the price offered the most preferred customer. All bids must be less than the price charged for similar services offered to similarly situated business customers by that carrier. This is the "discount" required by law. Customers who have access to competitive bidders are not guaranteed any specific percentage discount level.
- b. If no one bids, and thus a competitive market does not exist, the ILEC must offer free installation of the access "pipe." The ILEC should be reimbursed from the universal service fund for this provision of access. The ILEC would also be reimbursed for at least 10% of the usage price offered the ILEC's most preferred business customer, so that it could offer at least a 10% discount on usage to the school or library.
- c. If the institution is in a low-affordability zone (see below), any carrier, whether a winner of a bid or an ILEC with no competitors, would be reim-

bursed from the universal service fund for providing a specified minimum level of service (e.g. Internet access) as well as for the "pipe," at a rate that compensates the carrier for part of its market price for comparable services. At the same time, participants emphatically agreed that schools and libraries should themselves be required to pay a substantial percentage of the cost of service, to discourage the wasteful use that might occur when goods are free or nearly so.

d. Bona fide requests for service that trigger bidding should be required to explain the institution's needs, its intended applications, and the resources it will devote to making the proposed facilities usable and functional. The goal here is to maximize value to institutions, not to force them to engage in excess paperwork. Participants did not discuss how submissions would be judged adequate or inadequate, or exactly who would have authority to evaluate them. Some voiced concern over the possibly open-ended nature of the provisions that call for subsidizing educational institutions. These participants worried that the amount of money needed to subsidize "bona fide" requests could grow to the point where it would interfere with the basic thrust of the Act, which is to rely upon efficient, competitive markets.

Affordability zones

The Act says that access by schools and libraries must be "affordable," which suggests that they must be able to afford actually using the "pipe." Some schools and libraries may be unable to pay market-level usage rates, or even usage rates that carry a small discount. At that point, subsidies may be required. In order to establish entitlement for universal service subsidies, it is necessary to consider the relative ability of each institution to purchase services. In the interest of consistent and predictable decisions on subsidization, the Federal Communications Commission (FCC) should establish, based on census data or other appropriate data, "affordability zones." The zones may be based on per capita expenditures in schools and other data such as census reports of family income in the school's attendance area. Care should be taken to avoid anomalies, such as subsidizing schools from a small wealthy district, just because that district falls into the same zone as several poor areas. Databases that include demographic information are already collected by the U.S. Department of Education and the Department of Health and Human Services.

Conclusion

The conference clearly revealed that discussing universal service almost immediately requires a comprehensive understanding of the Telecommunications Act of 1996. This policy issue cannot be understood in isolation from the larger changes created and anticipated by the Act. Nor can universal service policy rationally be set without careful attention to its implications for the development of a competitive, technologically advanced telecommunications system. While the discussion at the meeting therefore ranged far beyond the matters summarized here, it did develop the universal service aspects in the most useful and innovative detail, and that is the reason for the focus of this report.

Appendices

Appendix 1 The Evolving Definition of Universal Service

These are some questions that participants identified as requiring careful analysis by policymakers as they confront fundamental changes in the telecommunications industry and evolving definition of universal service.

- What is the underlying rationale for identifying some services as "universal"? Is it to provide a simple connection to the public network, a jack for emergency services, or a connection to a community of interest?
- What does it mean to be identified as part of universal service? Does it mean that everyone should have it? That everyone would be able to get it if they requested it? That its prices are necessarily constrained by regulatory mechanisms?
- Which problem are we addressing: the issue of general availability and affordability? The support for low income and/or geographically disadvantaged users? Or institutional access?
- What mechanisms are there to achieve universal service goals, or, put differently, is subsidy the only tool? What is the role of competition in driving down costs such that some portion of universal service goals can be met without resort to subsidies?
- How can the definition of universal service be developed so that it is competitively neutral and does not favor the incumbent provider of universal telecommunications services today?
- If users get a line at a subsidy, do we care as a matter of policy what they do with it? E.g., if they attach a modem and computer to it, does that suggest a presumption that the user is not a fair recipient of universal service support?